

NORTH PACIFIC OCEAN

By WILLIS EDWIN HURD

The North Pacific Ocean, though roughened by high winds, yet exhibited no conditions of abnormal storminess during the month of January, 1925. The average wind velocity, however, along the northwestern coast of the United States, as well as along southeastern Alaska, was somewhat higher than the normal for January, and a maximum wind velocity of 80 miles an hour from the south occurred at North Head, Wash., on the 18th. Except for this wind of hurricane velocity, no gales exceeding 11 on the Beaufort scale have been noted in any vessel report yet received for the month. Rain, snow, and hail squalls were frequent over the northern routes, and fresh to whole gales were of daily occurrence over some part of the ocean north of the 30th parallel. Nevertheless, many vessels made trans-Pacific passages without encountering gales, while others seemed to meet with a succession of rough areas, almost from coast to coast.

Fog occurred occasionally along the northern and southern steamer tracks, but none was reported west of the 180th meridian, except for a single instance southeast of Taiwan. It occurred frequently down the American coast from Cape Mendocino to near Cape San Lucas, and at San Francisco this January was the foggiest on record. South of the Gulf of Tehuantepec fog occurred on the 8th and 10th.

The pressure situation was quite different from that of December, 1924, except in the Far East, where the Asiatic anticyclone continued to prevail along the coast. East of the 180th meridian the month opened with the great Pacific high well developed between the Hawaiian Islands and the American Continent, fair weather and moderate winds prevailing generally over this whole area. To the northward toward the Aleutian low, cloudiness with snow squalls increased, the low being now well developed and central near Kodiak. Nearly similar conditions lasted throughout the first decade, except that the low oscillated considerably, with the center or centers variously located over the Aleutians and the Gulf of Alaska. During this period at least four disturbances were detached from the parent cyclone and entered the Canadian Northwest.

During the remainder of the month the high fluctuated a great deal in position and intensity, though the center rarely left the ocean for the continent as it did in December. Its general region, moreover, was practically gale-free throughout the month. The low meanwhile was extraordinarily active over a large region. Several cyclones came into its western area, and no less than seven depressions, during the last two decades, moved from its center in the Gulf of Alaska into the American mainland.

From about the 21st to the 30th an active center of low pressure over mid-ocean caused moderate gales to storm winds between the 35th and 40th parallels and for some distance on either side of the 180th meridian. This cyclone had receded northward by the close of the month.

The following data for Dutch Harbor, Midway Island, and Honolulu are indicative of the barometric conditions in their respective neighborhoods:

The average 8 p. m. pressure at Dutch Harbor was 29.72 inches, or 0.01 inch above the normal. From the 9th until the 23d pressure was above normal, except on the 10th and 13th. On the 13th the lowest pressure of the month, 28.92 inches, occurred. It was followed on the 15th by the highest pressure, 30.34. During the period from the 8th to the 15th several violent barometric fluctuations took place. Kodiak to the eastward seems to have been very near the mean position for the month of the center of low pressure for the entire northern region, and readings there rarely equaled 30 inches. The minimum was 28.70 on the 1st.

At Midway Island the average 8 p. m. pressure was 29.96 inches, being 0.04 inch below the normal. The extremes were 30.24, on the 1st and 2nd, and 29.68, on the 25th. Here readings were above normal on the first 10 days and mostly below thereafter.

At Honolulu pressure was again high during January, the average—8 a. m. and 8 p. m.—being 30.05 inches, or 0.04 inch above the normal. Subnormal readings occurred only from the 11th to the 14th. The extremes were 30.16, on the 22d, and 29.80, on the 13th.

This January at Honolulu was the warmest on record, due largely to the extraordinarily high night temperatures. The extremes were 81° and 65°. The total rainfall was 1.58 inches, or 2.20 inches below the normal. The month was sunnier than usual. The prevailing wind direction was from the east, though the kona (southerly winds) blew during several afternoons. For the first 11 days the wind velocity averaged nearly 17 miles an hour, and during 9 of them the maximum velocity exceeded 25 miles. The highest velocity was 37 miles an hour from the east, on the 8th.

Along the greater part of the coast of the United States precipitation was mostly below normal and temperatures were generally above. But farther north the reverse was true, January being exceptionally cold at Juneau and snowfall exceptionally heavy—53.9 inches.

There is no evidence of tropical-storm development in the Far East. The only gale reports for the Tropics near the American coast were by vessels in the gulf south of Salina Cruz. These winds, of force 8 to 9, were observed on the 14th, 23d, and 24th.

For the ocean as a whole gales were not so widespread as during the previous month, owing to the fact that lows generally ran less far south. There was a slight increase in the number of days with high winds over the 10° square, the center of which is 40° N., 140° W., but elsewhere there was a decrease or little change.

Vessels reported gales of force 11 on the 2d in east longitudes and on the 6th, 8th, 13th, and 24th, in west, as indicated by the table.

NOTES

American S. S. *Dellwood*, Capt. Robert W. Shears, Observer J. A. Higgins, Seattle toward Alaska and return:

The gale of January 19 (in 55° 20' N., 131° 38' W.) commenced with ESE. wind, accompanied with heavy snow. At time of lowest barometer torrential rain, with no wind, occurred.

British S. S. *Sheaf Mead*, Capt. H. B. Rae, Observer W. H. Sculthorpe, Grays Harbor, Wash., toward Yokohama:

Noon January 31, in lat. 35° 34' N., long. 174° 30' W. The height of the waves was about 45 feet from the trough to the crest. Tried fuel oil over side from lee bow with very little effect. Vessel steaming slow with wind and sea on starboard quarter.